

REMARKS

Claims 1-3, 5-7, 11-12 and 14-20 are pending in this application. By this Amendment, claims 1, 5, 11, 14 and 15 are amended and claims 4, 8 and 13 are canceled without prejudice or disclaimer. Various amendments are made for clarity and are unrelated to issues of patentability.

Entry of the amendments is proper under 37 C.F.R. §1.116 because the amendments: (1) place the application in condition for allowance; (2) do not raise any new issues requiring further search and/or consideration; and/or (3) place the application in better form for appeal, should an appeal be necessary. More specifically, independent claims 1, 5 and 11 are amended into features of dependent claims 4, 8 and 13, respectively. Thus, no new issues are raised. Entry is proper under 37 C.F.R. §1.116.

The Office Action rejects claims 1-8 and 11-20 under 35 U.S.C. §102(b) over U.S. Patent 6,246,385 to Kinoshita et al. (hereafter Kinoshita) in view of newly-cited U.S. Patent 5,041,823 to Johnson et al. (hereafter Johnson). The rejection is respectfully traversed with respect to the pending claims.

Independent claim 1 recites a scan driving circuit for simultaneously applying scan pulses to both ends of each scan line of the flat display panel, a first data driving circuit for applying data pulses to odd numbered data lines among data lines of the flat display panel, and a second data driving circuit for applying data pulses to even numbered data lines of the data lines, wherein the scan pulses have a same voltage, a same phase and a same pulse width.

Reply to Office Action dated August 9, 2007

The applied references do not teach or suggest all the features of independent claim 1, which includes features of previous dependent claim 4. More specifically, Kinoshita discloses applying a signal line drive voltage in every horizontal scanning to one end and to the other end, respectively, of the signal lines, applying a scanning line drive voltage to one end and to the other end, respectively, of the scanning line to be activated at the horizontal scanning, and instructing generation of the signal line voltage in synchronism with the scanning line driving voltage to the signal line drive circuit on the basis of an input image signal.

Kinoshita does not teach or suggest a scan driving circuit for simultaneously applying scan pulses to both ends of each scan line of the flat display panel, a first data driving circuit for applying data pulses to odd numbered data lines among data lines of the flat display panel, and a second data driving circuit for applying data pulses to even numbered data lines of the data lines, wherein the scan pulses have a same voltage, a same phase and a same pulse width, as recited in independent claim 1.

Kinoshita is not capable of enhancing a difference of brightness of a screen by using a scan driving circuit in combination with a first data driving circuit and a second data driving circuit.

Johnson discloses a top set of column drivers 24 to drive even columns 28 and a bottom set of drivers 25 to drive odd columns 27. See col. 5, lines 27-30. However, Johnson does not teach or suggest a scan driving circuit for simultaneously applying scan pulses to both ends of each scan line of the flat display panel, a first data driving circuit for applying data pulses to odd

Reply to Office Action dated August 9, 2007

numbered data lines among data lines of the flat display panel, and a second data driving circuit for applying data pulses to even numbered data lines of the data lines, wherein the scan pulses have a same voltage, a same phase and a same pulse width, as recited in independent claim 1.

Johnson is not capable of enhancing a difference of brightness of a screen by using a first data driving circuit and a second data driving circuit in combination with a scan driving circuit, wherein the scan pulses have a same voltage, a same phase and a same pulse width.

Additionally, there is no motivation in the prior art to combine Kinoshita and Johnson. Rather, the combination described in the Office Action is based on impermissible hindsight. The Office Action (on page 3) appears to rely on Kinoshita's teaching of single sided driving in FIGs. 14-15 in order to provide the motivation and/or suggestion to combine Kinoshita and Johnson. However, Kinoshita's FIGs. 14-15 teach away from the claimed features.

Kinoshita's FIG. 14 teaches driving Y1-YM only from an upper signal line drive circuit 15 when including the scanning line left/right drive circuits 17A, 17B. FIG. 15 teaches driving Y1-YM only from a lower signal line driving circuit 16 when including the scanning line left/right drive circuits 17A, 17B. Kinoshita's FIG. 1 further discloses both an upper and lower signal line driving circuit 15, 16 when including the scanning line left/right drive circuit 17A, 17B. However, when including both the upper and lower signal line drive circuits 15, 16 only upper or lower halves of the display panel are driven by the respective circuits 15, 16. Kinoshita therefore clearly teaches that when using both scanning left/right driving circuits 17A, 17B, the upper and lower signal line driving circuits 15, 16 do not provide signals across the whole plasma

Reply to Office Action dated August 9, 2007

display panel. Kinoshita therefore teaches away from the claimed first and second data driving circuits when using the scanning line left/right driving circuits 17A, 17B.

The alleged teachings of Johnson would destroy this express purpose/intent of Kinoshita. Thus, the allegation that it would be obvious to modify Kinoshita is improper and contrary to Kinoshita's express teachings. The combination is therefore improper and based on impermissible hindsight.

Kinoshita and Johnson do not teach or suggest the claimed combination of the scan driving circuit, a first data driving circuit and a second data driving circuit, wherein the scan pulses have a same voltage, a same phase and a same pulse width, as recited in independent claim 1. Thus, Kinoshita and Johnson do not teach or suggest all the features of independent claim 1. Independent claim 1 therefore defines patentable subject matter.

Independent claim 5 recites a first scan driving circuit for applying scan pulses to one side of each scan line of the flat display panel, and a second scan driving circuit for applying the scan pulses to the other side of each scan line. Independent claim 5 also recites a first data driving circuit for applying data pulses to odd numbered data lines among data lines of the flat display panel, and a second data driving circuit for applying data pulses to even numbered data lines of the data lines, wherein the scan pulses have a same voltage, a same phase and a same pulse width.

For at least similar reasons as set forth above, the applied references do not teach or suggest all the features of independent claim 5. Thus, independent claim 5 defines patentable subject matter.

Independent claim 11 recites simultaneously applying scan pulses to both ends of each scan line of the flat display panel, applying data pulses to odd numbered data lines among data lines of the flat display panel, and applying data pulses to even numbered data lines of the data lines, wherein the scan pulses have a same voltage, a same phase and a same pulse width.

For at least similar reasons as set forth above, the applied references do not teach or suggest all the features of independent claim 11. Thus, independent claim 11 defines patentable subject matter.

Accordingly, each of independent claims 1, 5 and 11 defines patentable subject matter. Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-3, 5-7, 11-12 and 14-20 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

Serial No. **10/825,368**

Docket No. **P-0672**

Reply to Office Action dated August 9, 2007

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
KEB & ASSOCIATES, LLP



David C. Oren
Registration No. 38,694

P.O. Box 221200
Chantilly, Virginia 20153-1200
(703) 766-3777 DCO/kah

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Please direct all correspondence to Customer Number 34610